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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,795	11/06/2003	Elizabeth Tai	2001P12800U/S01	4815

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Elsa Keller, Legal Administrator
Siemens Corporation
Intellectual Property Department
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EXAMINER

GARRETT, DAWN L

ART UNIT PAPER NUMBER

1774

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,795

Applicant(s)

TAI ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11-6-2003 & 5-6-04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Office action is in response to the preliminary amendment dated May 6, 2004. Claims 1-23 were canceled and new claims 24-49 were added. Claims 24-49 are pending. Also, drawing Figure 3c was changed. The amendment to the specification has been entered.

Drawings

2. The change to drawing Figure 3C submitted May 6, 2004 is approved.

Claim Objections

3. Claims 26 and 43 are objected to because of the following informalities: The word "elecro-luminescent" should be changed to "electro-luminescent". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 26, 33, and 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not seen where the specification describes the electro-luminescent organic layer as "flat" or "substantially flat".

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 26, 33, and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "substantially" in claims 26, 33, and 43 is a relative term, which renders the claims indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 24-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagayama et al. (EP 0 732 868 A1) in view of Konuma et al. (US 2001/0019133). Nagayama teaches an organic electroluminescent display panel and method for manufacturing the same. The panel has a plurality of emitting portions including a substrate, first electrode, electrical insulation ramparts projecting from the substrate, organic functional layers including at least one organic electroluminescent medium, second electrode (see abstract). Figure 3 clearly shows that the organic functional layers (8) are separated by the insulative part (7). The insulative part reads upon the "insulating structure separating the electro-luminescent organic layer into a plurality of light-emitting elements". The organic El media may include an organic hole transport layer, an organic emitting layer and an organic electron transport layer (see col. 7, lines 50-55). Since

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claims 26, 33, and 43 do not clearly set forth "substantially flat", the organic emitting layer is deemed to read upon the instant "electro-luminescent layer" that is "substantially flat". In the Nagayama device, pixels are formed (see col. 2, lines 12-25). The insulative structure (7) is formed on the electrode layer (3) spaced apart from each other per the instant apertures of instant claim 27. The insulating structure (7) depicted in Figure 7 reads upon the bank structure recited in instant claim 28. Insulating structure (7) further comprises an overhang portion (7a), which reads upon the overhang portion recited in instant claims 29 and 48. Nagayama discloses depositing the layers of the light-emitting device according to the steps of instant claim 31 (see col. 4, lines 5-52) and teaches all the components of method claims 34-36, and 37-40. Nagayama teaches an insulating section (7) comprised of polyimide and silicon dioxide (see col. 8, lines 28-36) per the insulative structure of the instant claims, but fails to teach poly-siloxane as a suitable insulative material for forming the insulating section. Konuma et al. teaches in analogous art a light-emitting device comprising insulative material. Konuma et al. teaches polyimide resin and a resin containing a high molecular compound of siloxane are equivalent materials (see Konuma et al. (page 1, paragraph [0013])). It would have been obvious to one of ordinary skill in the art to have used a high molecular weight siloxane in the Nagayama device as the insulative material, because Konuma teaches high molecular weight siloxane may be used in place of polyimide as an insulative material.

Nagayama discloses vacuum deposition is used in forming the organic layers, but fails to disclose the methods of depositing the organic layer per instant claim 32. Konuma et al. teaches in analogous art that the organic EL layer may be formed by spin coating or by using ink jet methods. It would have been obvious to one of ordinary skill in the art to have used spin coating

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or ink jet methods for forming the Nagayama organic EL layers, because Konuma et al. teach these methods as conventional methods in the art for forming organic EL layers.

With regard to the method limitations of claims 24, 25, 41, and 42, these are considered to be product-by-process type limitations. See M.P.E.P. § 2113:

“Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985)...

“The Patent Office bears a lesser burden proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature” than when a product is claimed in the conventional fashion.

In re Fessman, 180 USPQ 324, 326 (CCPA 1974).

Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

Response to Arguments

11. Applicant's arguments filed May 6, 2004 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

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generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Konuma is relied upon to show poly-siloxane as a well known insulating material. Applicant argues poly-siloxane and polyimide do not have the same wetting and curing properties; however, this argument is not found persuasive because none of the claims are directed to the wetting or curing properties of the poly-siloxane insulating structure. In addition, the examiner notes that the wet-chemical techniques recited for the electro-luminescent layer in the product claims are not patentably significant, because they are product-by-process limitations (see above description of "product-by-process").

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is 571-272-1523. The examiner can normally be reached Monday through Friday during normal business hours. Please allow the examiner twenty-four hours to return your call.

If reasonable attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached at 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dawn Garrett

**DAWN GARRETT
PATENT EXAMINER**

D.G.

May 19, 2004